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TOMORROW'S LANGUAGE LAB TODAY.

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LANGUAGE LABORATORIES HAVE CHANGED FROM SIMPLE INSTALLATIONS, EQUIPPED WITH RECORD PLAYERS OR TAPE RECORDERS, TO COMPLEX INSTALLATIONS WITH FACILITIES FOR SELF-INSTRUCTION, DIAL SELECTION OF AUDIO PROGRAMS, REMOTE STORAGE OF TAPES, AND EVEN RECEPTION OF TV. LANGUAGE LABORATORIES OF THE FUTURE MUST HAVE THE CAPABILITY OF BEING OPERATED EFFICIENTLY ON A PARTIAL OR TOTAL SELF-INSTRUCTIONAL BASIS, AND MUST BE FLEXIBLE ENOUGH TO PERMIT THE USE OF A VARIETY OF TEACHING TECHNIQUES AND MATERIALS. THE AUDIO-VIDEO LABORATORY MEETS THESE REQUIREMENTS. A LAB OF THIS TYPE WAS INSTALLED AT FLORIDA ATLANTIC UNIVERSITY AFTER SELF-INSTRUCTIONAL AND AUDIO-VIDEO MATERIALS HAD BEEN DEVELOPED BY STAFF MEMBERS AND ELECTRONIC STUDIES HAD BEEN MADE BY THE ENGINEERING STAFF OF CONTINUOUS PROGRESS EDUCATION. IT IS EQUIPPED WITH 40 POSITIONS WITH FACILITIES FOR DIAL SELECTION OF ANY OF 100 AUDIO PROGRAMS FROM A REMOTE LIBRARY. TEN BOOTHS CAN BE USED INDEPENDENTLY OF THE CONSOLE TO RECORD AUDIO PROGRAMS AND RESPONSES ON REMOTELY LOCATED TAPE RECORDERS. TEN POSITIONS ARE EQUIPPED FOR VIDEO RECEPTION. IT IS EXPECTED THAT THIS LABORATORY WILL PROVIDE TEACHING MACHINE CAPABILITIES FOR THE LANGUAGE PROGRAM AT FLORIDA ATLANTIC UNIVERSITY. PLANS FOR FUTURE EXPANSION OF THE LABORATORY INCLUDE INSTALLATION OF DIAL FACILITIES IN DORMITORIES AND LIBRARY, AND ADPATATION TO A COMPUTER SYSTEM. THIS ARTICLE IS PUBLISHED IN THE "FLORIDA FL REPORTER," WINTER, 1965-1966. (AM)

TOMORROW'S LANGUAGE LAB TODAY

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Since 1946 when Alfred S. Hayes developed his language laboratory at Louisiana State University, language laboratories have undergone many technical changes — from phonograph records to tape, from individual tape recorders to remote audio individual dial selection, and finally to remote audio-video individual dial selection.

As a result of scientific research in language and language learning, methods and techniques of language teaching have also changed. Pattern drills are being replaced by pretested materials based on applied linguistics and programmed instruction. The language laboratory was at first instrumental in changing some conventional teaching concepts; now, later research results are changing the role of the language laboratory—from that of "teaching aid" to that of a "teaching machine." Rand Morton (1) and others some time ago predicted this evolution, and it is becoming more and more a reality. The "teaching machine" (or the use of the language laboratory as a "teaching machine") has been misunderstood by many as a machine that substitutes for the teacher, when in actuality it substitutes for the conventional teaching materials and teaching concepts; there is no substitute for the teacher.

Many teachers and administrators have not yet accepted this new role of the language laboratory, and thus they purchase equipment which is obsolete before installation. These people have not yet realized that educationally speaking we are in a new age: the age of mass "overcrowded" education. The demands of this new age must be met with new approaches. There has been a great deal of discussion about the experimentation and research results obtained from studies involving "teaching machines", some of which were developed for the teaching of languages. These machines have developed out of research on perception and utilize audio-visual techniques. (2) Professor John B. Carroll (3) of Harvard points out that some of these machines could be part of a language laboratory installation. There are several major obstacles to this: they are often extremely expensive ($5,000 for Carroll's machine), are too complicated for student operation, are not flexible in terms of usage, and most important, the machines developed to date are incapable of developing in the student a "terminal behavior" related to the normal social verbal communication.

Undoubtedly, new developments in "teaching machines" for foreign languages must move away from complicated mechanical manipulations and become more realistic. An FL "teaching machine", in addition to normal prerequisites of a conventional language laboratory, must have other requirements to be able to operate efficiently on a total or partial self-instructional basis. It must be very flexible — that is, allow for many types of instructional techniques, and it must provide a wide range of programs for student selection. Ideally, *N* students should be able to select *N* programs at any time. It has to offer both audio and video facilities at the touch of a finger. (4)

With this multi-media "teaching machine" it has been our experience that it is then up to the programmers with a knowledge of the task to render the machine as efficient as possible. For imaginative programmers there is no limit. Machines do not really teach just as telephones do not talk. The teacher still teaches—however, in a different manner, through programmed materials. As a matter of fact, the teacher's role will also change with the use of audio-video self-instructional courses. In certain aspects the teacher himself will become more and more like a TV producer.

The concept of teaching an FL using a video presentation is not a new one. Television has been used and abused in FL teaching — so much so, that Elton Hocking (5) stated that he was not very impressed by the results obtained from it, and rightly so. Television, however, offers the greatest challenge and opportunities for FL teaching since no other medium can bring the learner so close to real-life situations. Unfortunately, the potentialities of TV for FL teaching have been much neglected. J. R. Reid, in "An Exploratory Survey of Foreign Language Teaching by Television in the United States", (6) bemoans the lack of research and experimentation in this field. There have been very few attempts to prepare a TV presentation integrated with programmed learning materials. This apparent neglect of investigation of TV as a self-instructional medium on a wide scale might be due to several causes. For instance, Professor William Locke (7) of MIT, who believes in TV instruction, states that to develop a first-year course for television would cost from one to one and one-half million dollars. Other people believe that individual audio-video dial selection is such an expensive item as to be out of reach of the budget of most schools or universities. From our experiences, we are convinced that a basic skills course can be developed for approximately fifty thousand dollars (even less if you do several) and that a remote audio-video dial selection laboratory is not as expensive as was thought. As a matter of fact, this laboratory set-up offers a very economical program through the kind of instruction one gets and the saving of man-power.

The audio-video language laboratory, with appropriate materials, has all the characteristics necessary

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to be an efficient teaching machine. (Many of the pitfalls of total self-instructional materials available today have arisen because this type of installation has not been used.) Several years ago, at the Language Institute of the University of Hartford, we began to prepare and experiment with self-instructional materials based on this theory. The findings of our research indicated the tremendous possibilities of these self-instructional audio-video programs. The theories behind our research were presented in a paper at the second National Society for Programmed Instruction (NSPI) Convention at San Antonio, Texas, in 1964. (8) While we were working on the materials, Herman Taub and the engineering staff of Continuous Progress Education were doing research in the electronics aspects of the problem, especially in the video switching capabilities. The results have produced the first audio-video dial selection language laboratory in the world, designed by us in conjunction with CPE and currently being installed by CPE at Florida Atlantic University.

The basic characteristics of this laboratory match the requirements set up earlier in this article. Specifically, the first installation is a 40-position laboratory. Students in the booths will be able to dial-select any one of 100 audio programs from a remote-program library. In addition, at ten positions students will be able to dial-select video programs from two remote video tape recorders (VTR). They will be able to rewind and replay programs at will for study or review purposes. Original programs can be prepared on these VTR or can be prepared on existing TV facilities at the university for replay in the laboratory. Ten of the forty positions will have full push button control of personal tape recorders. At these positions students will be able to automatically record the dial-selected program and their own responses as well. They will be able to reverse, fastforward, replay and stop. In other words, they will be in complete control of the recorder. Meters and lights will indicate the position of the tape in the remotely located machine. The console, which will be located on the other side of a glass wall in an adjoining room, will have all of the functions of a conventional language laboratory console (there will be monitoring and communicating facilities, etc.). In addition, teachers will be able to remote-test at the console by simultaneously recording groups of students. This is necessary for evaluation and analysis of student progress.

Briefly, this is what our new language laboratory will do. In conjunction with the programmed materials being developed we expect that it will provide "teaching machine" capabilities for our language program. It will also afford us an invaluable teaching tool in the training of our own university faculty and staff and will add impetus to our FL teacher training program. Very important, of course, is the fact that it provides us with research facilities unequaled anywhere in the U.S. In this the initial stages of utilization we have foreseen two major changes. The first is that the dial facilities will be expanded to the dormitories and library and that additional audio-video program sources and student positions will be provided as needs dictate. The second future change is one dictated by the need to avoid obsolescence. We have arranged for the whole system to be adaptable to computer logic so that with the fast-developing use of the computer in FL teaching situations (9) we will be able to switch to an infinitely more flexible system.

Thus begins a new stage in language teaching and many of the findings will be applied to improve the teaching of other disciplines as well as that of languages.

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